



FALL 2004
VOLUME 2, ISSUE 4

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ARRO provides advice, design, project management, and consulting services for a wide range of infrastructure, including water, wastewater, and transportation services.

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ARRO Expands into New Lehigh Valley Office

Lehigh Valley, Pennsylvania is growing and ARRO is growing with it!

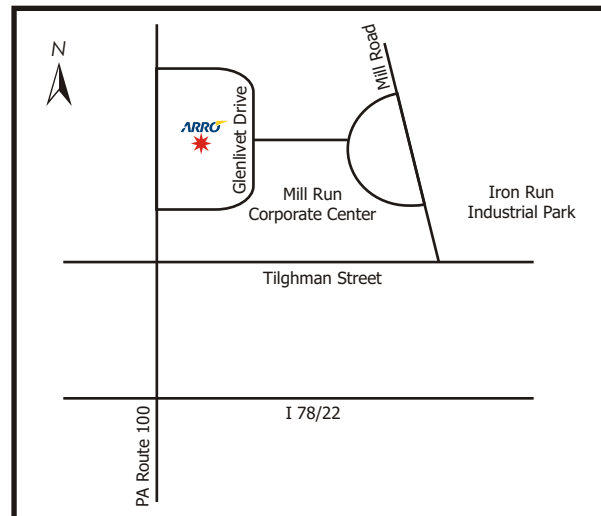
ARRO is pleased to announce the opening of its newest office in Upper Macungie Township, Lehigh County, about 60 miles north of its Lancaster headquarters. Located in the heart of Lehigh Valley near the busy Route 100/Interstate 78 interchange, the new location will enable ARRO to better serve a growing list of clients in the northeast region of the state, including Lehigh, Northampton, Schuylkill, Carbon, and Monroe counties.



Home to a number of thriving municipalities and some of the world's top corporations, Lehigh Valley is centrally located. Boasting nationally recognized hospitals, educational institutes, and a vibrant arts and cultural scene, Lehigh Valley is home to approximately 600,000 residents.

ARRO is no stranger to this part of Pennsylvania and has, in fact, been working with clients throughout the region for many years. With the additional technical expertise housed in this new office, ARRO will be better able to serve the needs of existing clients such as Bethlehem Township, Lehigh County Authority, and Pen Argyl Borough while pursuing new business opportunities in the region.

ARRO welcomes this opportunity to work more closely with our existing Lehigh Valley clients, to develop new business relationships, and to continue to provide the same responsive service as we have done in the past.



WORKPLACE LITE

SEEN ON A BULLETIN BOARD:

Are you bored?
Tired of working alone?
Hate having to make your own decisions?

Then try the proven solution corporate America relies on:

HOLD A MEETING!!!

With a meeting, you can ...

- ▶ Get out of your cubicle!
- ▶ See people!
- ▶ Blame your failed projects on others!
- ▶ Eat donuts!
- ▶ Weigh in on issues you know nothing about!
- ▶ Feel important!
- ▶ Make group decisions so you alone can't be held accountable!

ALL ON COMPANY TIME!!!

Meetings: The practical alternative to work.



ARRO OFFERS OPERATOR TRAINING COURSES

ARRO is accredited by the PA DEP Bureau of Water Supply & Wastewater Management to provide water and wastewater training to comply with continuing education requirements for operator certification.

Recently, an operator safety course entitled "Operator Health & Safety Survival Guide" attracted over 60 enrollees from more than 27 municipal and industrial/commercial facilities throughout Lancaster, Lebanon, York, Dauphin, and Chester Counties, Pennsylvania. Intended for operators, managers, and consultants of water and wastewater facilities, the one-day

course afforded a review of many aspects of health and safety in the water and wastewater industry, including an overview of Occupational Safety & Health Act (OSHA) record keeping and reporting requirements. Occupational hazards including chemical safety, electrical safety, fire safety, laboratory safety, and confined space safety were addressed. Breakout sessions included the review of safety and protective equipment commonly used in the water and wastewater industry for general health, confined space, and trench safety. Eligible attendees received six contact hours toward PA DEP's water and wastewater operator certification requirements. The

course was also approved for PENNVEST training credits.

Todd M. Mace, L.O., ARRO Environmental Services' operations manager, developed the course and served as instructor. He has been operating, maintaining, and troubleshooting industrial and municipal water and wastewater facilities since 1989. Todd has provided certified operator training and on-site technical assistance for water and wastewater systems throughout Pennsylvania to promote proper treatment techniques and increase operational and management skills of operational personnel.

ARRO'S WATER & WASTEWATER WORD SEARCH



- 1 TOXIC
- 2 RAS
- 3 EXFILTRATION
- 4 PRESSURE
- 5 AIRLIFT
- 6 MANHOLE
- 7 RUST
- 8 WASTEWATER
- 9 RERATE
- 10 OXIC
- 11 WELLHEAD
- 12 EDU
- 13 HYDRAULIC
- 14 CBOD
- 15 MICROBIOLOGY
- 16 FORCEMAIN
- 17 VOC
- 18 INORGANIC
- 19 GRAM
- 20 OPERATOR
- 21 CHLORINE
- 22 UNDERDRAIN
- 23 INFILTRATION
- 24 SOC

Now that you've found the hidden words, use the first letter of the highlighted words to spell the hidden word.

HINT: A group of people working to protect your water & wastewater investments.

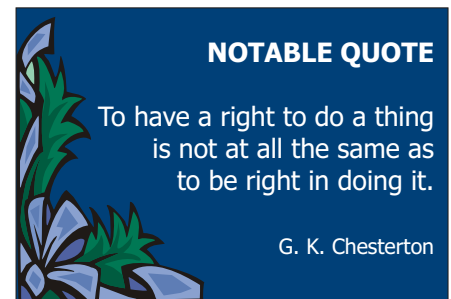
The first person to e-mail the correct answer to info@thearrogroupp.com will win a prize. ARRO employees not eligible.

The correct answer to the last issue's "Guess Who?" introduction was "Larry A. Dietrich," and the winner was Steve Hunsberger (Bethlehem Township, PA).

NOTABLE QUOTE

To have a right to do a thing is not at all the same as to be right in doing it.

G. K. Chesterton



WATER SUPPLY SYSTEM EXPANSION - SCHWENKSVILLE, PA

The Schwenksville Borough Authority owns and operates a water system that provides potable water within the Borough of Schwenksville and in portions of Lower Frederick Township and Perkiomen Township (Montgomery County, PA).

The system currently has approximately 1,800 connections and current water consumption from the system averages about 370,000 gallons per day (gpd).

In recent years, the Authority met the potable water needs of its service area with four supply wells and an interconnection with Aqua America (formerly Philadelphia Suburban Water Company). These wells vary in production capabilities from 32 to 200

gallons per minute (gpm), as permitted by the Pennsylvania Department of Environmental Protection (PA DEP) and the Delaware River Basin Commission (DRBC). By agreement with Aqua America, the Authority has been allowed to utilize up to 120,000 gpd from the existing interconnection.

Previously there were three standpipe type storage tanks and one covered ground level storage tank in Schwenksville's water system to supplement the wells and the interconnection. These tanks vary in capacity from 100,000 gallons to 250,000 gallons.

The Authority has continued to take a proactive approach to meeting the needs of its customers. With this in mind, a fifth supply well (Well 9), a booster pumping station, and another 100,000 ground storage tank was constructed. Water from the new well is now being used to supplement the Authority's existing groundwater supplies and reduce dependence on the interconnection with Aqua America, which was originally intended to be for emergency use

only. The new storage tank provides chlorine detention for the new water supply as well as distribution storage and fire protection reserve for the entire system, including the new Perkiomen Valley Middle School West, which was recently constructed.

Well 9 has a permitted production rate of 70 gpm (100,000 gallons per day). The tank is a welded steel ground storage tank. The booster pumping station draws water from the storage tank and pumps it into the distribution system utilizing a constant speed jockey pump and two variable speed booster pumps. The station is capable of supplying over 500 gpm which helps meet the domestic and fire demands of the system.

Since the booster pump station and the tank are located in a pastoral setting, the Authority felt that it was important that the structures and the adjacent landscaping be aesthetically pleasing to the surrounding residents. The Authority worked closely with Lower Frederick Township, the owner of the land on which the facilities are located, to attain that goal.



PHASE II ENVIRONMENTAL ASSESSMENTS

ARRO offers comprehensive environmental site assessment (ESA) services to new and existing clients. ARRO has the in-house expertise to complete all phases of ESA through comprehensive site characterization. This includes professional geologists and engineers with expertise in the fields of geology, hydrogeology, and environmental engineering.

ESAs are commonly referred to as Phase I and Phase II assessments. ARRO has performed numerous Phase I ESAs according to American Society of Testing & Materials (ASTM) standards for a variety of clients purchasing or refinancing properties. The purpose of the Phase I is to identify potential environmental concerns and liabilities. A Phase I ESA is limited to records review, chain-of-title searches, interviews with property owners, and site reconnaissance to establish site history and identify potential environmental concerns.

Phase II ESAs are typically driven by the need to confirm the findings of a Phase I ESA or to investigate suspected environmental impacts from surface and subsurface releases of regulated substances. These types of projects include regulated storage tank corrective action and Pennsylvania Act 2 sites.

Investigation of a petroleum release from an aboveground or underground storage tank system is a common example of a Phase II ESA project and includes properties currently or formerly used as service stations or bulk storage facilities. Commercial and industrial properties with a history of regulated substance use or storage are also common examples of Phase II projects. Phase II ESAs typically involve the following activities:

- Drilling and installation of soil borings and groundwater monitoring wells;

- Sampling and analysis of soil, groundwater, and soil vapor;
- Environmental monitoring to identify trends in soil and groundwater quality;
- Data compilation, interpretation and reporting; and
- Interaction and negotiation with regulatory agencies.

A complete Phase II ESA can be of great value to the property owner. A comprehensive site characterization in Pennsylvania may be used to demonstrate attainment of an Act 2 remediation standard in cases where the extent of the release is defined and the risks associated with it are identified. Upon attainment, the owner will receive liability protection from the Pennsylvania Department of Environmental Protection, assuring potential buyers and lenders that the environmental quality of the property is acceptable.

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LATEST DEVELOPMENTS

NEW LEHIGH VALLEY OFFICE MANAGER

ARRO welcomes Freddy Lutz, Jr. as the office manager for ARRO's new Lehigh Valley office. Freddy was formerly the assistant zoning officer for Lower Saucon Township and is experienced in a wide range of municipal operations, procedures, and regulations. Freddy has a strong working knowledge of the Pennsylvania Municipalities Planning Code and the Second Class Township Code. He also is experienced in the implementation and utilization of geographic information systems (GIS). A Lehigh Valley resident,



Freddy's background with Lower Saucon Township as well as his intimate knowledge of the Lehigh Valley Area provides him with a unique perspective of the issues and concerns affecting the Lehigh Valley.

CITY OF ABERDEEN, MD

The City of Aberdeen, MD recently retained ARRO to provide design services for the HEAT Center elevated water storage tank, and to perform a sanitary sewer system evaluation of the Mulberry Point section of Aberdeen Proving Grounds.

CECIL COUNTY, MD

Cecil County, MD selected ARRO to complete water distribution system mapping and hydraulic modeling for the Pine Hill, Arundel, and Mariner's Cove areas of the County.

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